



June 8, 2017

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20510

Jeffrey A. Marks
Elizabeth Rojas Levi

Government Relations
Nokia

Address:
1100 New York Avenue, NW
Suite 705 West
Washington, DC 20005

Email:
jeffrey.marks@nokia.com

Re: Reply Comments of Nokia

FCC Seeks Comment and Data on Actions to Accelerate Adoption and Accessibility of Broadband-Enabled Health Care Solutions and Advanced Technologies, GN Docket No. 16-46

Dear Ms. Dortch:

Nokia respectfully submits these Reply Comments to further augment the record in the above captioned proceeding. Specifically, in Exhibit 1, Nokia responds to Question 34 and Question 37 of the Commission's Public Notice which seek specific examples demonstrating the efficacy of broadband enabled health care. The examples provided in response to Question 34 demonstrate the benefits of self-monitoring in the areas of activity, weight and blood pressure and sleep to achieve positive health care results. In response to Question 37, Nokia provides examples of studies reviewing the efficacy of recently released remote health care applications. Exhibit 2 provides descriptions of a sampling of 30 studies using Nokia Withings devices and data, demonstrating our commitment to medical research.

Please contact the undersigned with any questions regarding this submission.

Respectfully submitted,

/s/ Jeffrey A. Marks

Jeffrey A. Marks
Elizabeth Rojas Levi

Attachments

Exhibit 1

Question 34: We seek current information and data on the effectiveness of broadband-enabled telehealth and telemedicine services, including any recent research on these services. How are patients responding to these services? We are particularly interested in receiving comments directly from consumers about their experience with these and other broadband-enabled services and technologies.

Self-Weighing has been demonstrated to have a positive impact on weight loss.

- Duke: *The efficacy of a daily self-weighing weight loss intervention using smart scales and emails*, <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3788086/> (concluding that an intervention focusing on daily self-weighing can produce clinically significant weight loss).
- Minneapolis Heart Institute Foundation: *The Impact of Regular Self-weighing on Weight Management: A Systematic Literature Review*, <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2588640/> (concluding that frequent self-weighing, at the very least, seems to be a good predictor of moderate weight loss, less weight regain, or the avoidance of initial weight gain in adults).
- Stanford Medicine: *A Review of Efficacious Technology-Based Weight-Loss Interventions: Five Key Components*, <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3000900> (finding that technology-based approaches (e.g., Internet access to tools, mobile monitoring, etc.) are more efficacious than relying only on traditional approaches).
- University of Manchester: *Who Self-Weighs and What Do They Gain From It? A Retrospective Comparison Between Smart Scale Users and the General Population in England*, J Med Internet Res. 2016 Jan; 18(1): e17., <https://www.ncbi.nlm.nih.gov/pubmed/26794900> (finding that a reduction in BMI was independently associated with greater engagement with self-weighing).

Self-Measurement of Blood Pressure using a smart cuff, has shown to increase blood pressure control and eventually lead to drop in BP levels due to stricter compliance with treatments and healthier lifestyles.

- The European Society of Hypertension: *European Society of Hypertension guidelines for blood pressure monitoring at home: a summary report of the Second International Consensus Conference on Home Blood Pressure Monitoring*, <http://www.ncbi.nlm.nih.gov/pubmed/18622223> (recommends the use of home blood pressure monitoring in clinical practice and in research).

The impact of multi-dimensional tracking: Activity, Weight and Blood Pressure and Sleep are highly correlated, with Activity having a positive effect on all other metrics.

- *Study of a Large Cohort of Connected Devices Users to Assess The Association Between Walking And Blood Pressure*, Brouard M, Chieh A, Lelong H, Menai M. <http://www.ncbi.nlm.nih.gov/pubmed/26102830> (finding that physical activity improves physical health and helps lower blood pressure; these results provide new insights for additional tailored non-pharmacological measures using connected devices).

Question 37: We seek submissions of any case studies, research and video/audio summaries concerning recently launched applications/programs that are on the cutting edge of telehealth, telemedicine, mHealth, and other broadband-enabled health technologies and services.

Blood Pressure Managed Care using Withings' BPM.

- Ochsner Health Systems: *Hypertension Digital Medicine Program*, <https://www.ochsner.org/services/hypertension-digital-medicine> (hypertension patients sent home with Withings blood pressure monitoring devices; study demonstrated patient hypertension control rates were up to 86% with Nokia wireless blood pressure monitoring compared to 52% without).
- American Medical Group Foundation: *Measure Up/Pressure Down® Campaign and Withings Announce High Blood Pressure Pilot Project Outcomes*, [Press release](#) (finding positive impact of self-monitoring of blood pressure).
- Belgian Outpatient Clinic: *Remote Monitoring of Hypertension Diseases in Pregnancy: A Pilot Study*, <http://mhealth.jmir.org/2017/3/e25/> (finding that, using Nokia/Withings connected solutions is a promising tool in prenatal care to reduce antenatal interventions, in particular due to uncontrolled hypertension).
- Leiden Hospital (Netherlands): *Evaluation of the Use of Home Blood Pressure Measurement Using Mobile Phone-Assisted Technology: The iVitality Proof-of-Principle Study*, <http://mhealth.jmir.org/2016/2/e67/> (finding improved medical adherence and control of blood Pressure using wireless blood pressure monitoring and mobile reminders).
- French Union of Cardiologists: *Suivi Observationnel d'une Population Hypertendue grâce aux Objets Connectés étude initiée par la Commission Santé Numérique*, <http://ufcv.org/category/formations/sophoc/> (finding BP measurement in users has led to greater engagement in self-care).

Congestive Heart Failure (CHF).

- Brockton Hospital Massachusetts with partner iGetBetter: *Patient Engagement With a Mobile Web-Based Telemonitoring System for Heart Failure Self-Management: A Pilot Study*, <http://mhealth.jmir.org/2015/2/e33/> (showing that only 5% of patients in the study group were readmitted within 30 days, compared to the overall Massachusetts General Hospital 30-day readmission rate of 23.4%).
- The Norwegian Center for Integrated Care and Telemedicine, in partnership with the Northern Norway Hospital: *Congestive Heart Failure Home Telemonitoring*, <https://clinicaltrials.gov/ct2/show/NCT02048748> (showing that monitoring CHF patients with Nokia Wi-Fi scales generating automatic alerts is clinically effective and cost-effective (on-going study)).